## **WEST Search History**

Hide Items | Restore | Clear | Cancel

DATE: Wednesday, April 07, 2004

Hide?	Set Name	Query	Hit Count
	DB=PC	GPB, USPT, EPAB, JPAB, DWPI; PLUR=YES; OP=OR	
	L17	6197559.pn. and pyruvate	1
	L16	L15 and 17	30
	L15	poxb.ti. or poxb.ab.	41
	L14	L12 and l11	6
	L13	L12 nad l11	12818
	L12	(enterobacteri\$ or coli or escherichia) same 17	2667
	L11	L10 and 19	75
	L10	15 with (reduce or reduction or eliminat\$ or attenuat\$ or delet\$ or disable)	124
	L9	L8 and (enterobacteri\$ or coli or escherichia)	651
	L8	L7 and 15	687
	L7	L6 with (produce or production or manufact\$ or isolat\$ or fermentation or prepare or preparation)	68458
	L6	amino adj acid	232250
	L5	pyruvate adj (dehydrogenase or oxidase)	1697
	DB=PC	GPB; PLUR=YES; OP=OR	
	L4	20030017554.pn. and \$express\$	1
	L3	L2 and overexpress\$	0
	L2	20030017554.pn.	1
	DB=US	SPT; PLUR = YES; OP = OR	
	L1	4278765.pn.	1

END OF SEARCH HISTORY

## 10/076416 STN Search Summary

## => d his

- FILE 'CAPLUS' ENTERED AT 14:34:43 ON 07 APR 2004

  L1 6053 S PYRUVATE (2W) (OXIDASE OR DEHYDROGENASE)

  L2 612181 S AMINO (W) ACID

  L3 201594 S L2 (P) (PRODUC? OR ISOLAT? OR MANUFACTUR? OR FERMENT? OR PREP

  L4 377 S L1 AND L3

  L5 2145 S L1 (P) (ATTENUAT? OR ELIMINAT? OR DECREAS? OR DISABLE? OR RED

  L6 92 S L5 AND L3

  L7 33 S L6 AND (COLI OR ENTEROBACTER? OR ESHERICHIA)
- => d 1-33
- L7 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:198192 CAPLUS
- TI Fermentative production of L-methionine with recombinant Coyrnebacterium glutamicum overexpressing gene metF
- IN Kroeger, Burkhard; Zelder, Oskar; Klopprogge, Corinna; Schroeder, Hartwig; Haefner, Stefan

	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PΙ	DE 10239308	A1	20040311	DE 2002-10239308 20020827
	WO 2004024931	A2	20040325	WO 2003-EP9451 20030826
PRAI	DE 2002-10239308	Α	20020827	

- L7 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:38875 CAPLUS
- $\ensuremath{\mathsf{TI}}$  Exploring the overproduction of amino acids using the bilevel optimization framework  $\ensuremath{\mathsf{OptKnock}}$
- AU Pharkya, Priti; Burgard, Anthony P.; Maranas, Costas D.
- SO Biotechnology and Bioengineering (2003), 84(7), 887-899
- L7 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:837302 CAPLUS
- TI Methionine synthase genes and bacteria for L-methionine production
- IN Kroeger, Burkhard; Zelder, Oskar; Klopprogge, Corinna; Schroeder, Hartwig; Haefner, Stefan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	WO 2003087386	A2	20031023	WO 2003-EP4010	20030416
	DE 10217058	A1	20031127	DE 2002-10217058	20020417
PRAI	DE 2002-10217058	A	20020417		

- L7 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:492559 CAPLUS
- TI Process for fermentative prepn. of L-amino acids in coryneform bacteria with amplification of gnd gene and attenuation of poxB gene
- IN Dunican, L. K.; McCormack, Ashling; Stapelton, Cliona; Burke, Kevin; Mockel, Bettina
- PA Ire.
- SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 531,265, abandoned.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 2003119154	A1	20030626	US 2002-78167	20020220
	US 2004063181	A1	20040401	US 2003-686736	20031017
PRAI	US 2000-531265	В2	20000320		
	US 2002-78167	A3	20020220		

- L7 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:473143 CAPLUS
- TI Fermentative production of L-lysine by Corynebacterium glutamicum strain with an attenuated citE gene
- IN Farwick, Mike; Huthmacher, Klaus; Marx, Achim; Bathe, Brigitte; Pfefferle, Walter

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 2003113879	A1	20030619	US 2001-770688	20010606
	US 2003157666	A1	20030821	US 2003-375355	20030228
PRAI	US 2001-770688	A3	20010606		

- L7 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:454941 CAPLUS
- TI Process for the fermentative preparation of Lamino acids with amplification of the tkt gene
- IN Burke, Kevin; Dunican, L. K.; Duncian, Rita; McCormack, Ashling; Stapleton, Cliona; Mockel, Bettina; Thierbach, Georg
- PA Ire.
- SO U.S. Pat. Appl. Publ., 23 pp., Cont.-in-part of U.S. Ser. No. 986,649, abandoned.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PΙ	US 2003109014	A1	20030612	US 2002-143856	20020514
PRAI	US 2000-528196	B2	20000317		
	US 2001-986649	B2	20011109		

- L7 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:434740 CAPLUS
- TI Biosynthetic preparation of non-aromatic L-amino acids in Enterobacteriaceae bacteria
- IN Rieping, Mechthild
- PA Degussa A.-G., Germany
- SO PCT Int. Appl., 34 pp.

PATENT NO.	KIND	DATE	APPLICATION NO. DATE
WO 2003046184	A1	20030605	WO 2002-EP10792 20020926
DE 10157721	A1	20030605	DE 2001-10157721 20011124
DE 2001-10157721	A	20011124	
	WO 2003046184 DE 10157721	WO 2003046184 A1	WO 2003046184 A1 20030605 DE 10157721 A1 20030605

- L7 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:133477 CAPLUS
- TI Production of L-amino acids by Corynebacterium glutamicum strains with attenuated otsB, treY or treZ genes
- IN Wolf, Andreas; Schischka, Natalie; Hermann, Thomas; Morbach, Susanne; Kraemer, Reinhard

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	WO 2003014370 WO 2003014370	A2 A3	20030220 20031211	WO 2002-EP5264	20020514
PRAI	DE 10139062 US 2003092139 DE 2001-10139062 US 2001-316276P	A1 A	20030515 20010809	DE 2001-10139062 US 2002-212219	
L7 AN	ANSWER 10 OF 33 2003:76954 CAPL	US			
TI IN	<del>-</del>			i for the fermenta n attenuated aceK	
111	PATENT NO.	KIND	DATE	APPLICATION NO.	
ΡI	WO 2003008616 WO 2003008616	A2	20030130	WO 2002-EP7353	
PRAI	DE 10135051 DE 2001-10135051 US 2001-306867P	A1 A	20030206 20010718	DE 2001-10135051	20010718
L7 AN TI		US fied E	scherichia col:	i for the fermenta	
IN	Hermann, Thomas PATENT NO.	KIND	DATE	n attenuated aceB of APPLICATION NO.	DATE
ΡI	WO 2003008604	A2	20030130	WO 2002-EP7352 DE 2001-10135051	
PRAI	DE 10135051 DE 2001-10135051 US 2001-306867P	A	20010718	DE 2001-10135051	20010718
L7 AN	ANSWER 12 OF 33 2003:76941 CAPLO		S COPYRIGHT 20	004 ACS on STN	
TI IN		reonin	e containing ar	i for the fermentand attenuated aspA	
11,	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003008603 WO 2003008603	A2 A3	20030130 20030731	WO 2002-EP7351	20020703
PRAI	DE 10135051 DE 2001-10135051 US 2001-306867P	A1	20030206 20010718 20010723	DE 2001-10135051	20010718
L7	ANSWER 13 OF 33 2003:76940 CAPLE	CAPLU: US	S COPYRIGHT 20	004 ACS on STN	
AN DN	138:132150				

	PATENT NO.	KIND	DATE	APPLICATION NO.	
ΡI	WO 2003008602 WO 2003008602	A2 A3	20030130 20030731	WO 2002-EP7350	20020703
PRAI	DE 10135051 DE 2001-10135051 US 2001-306867P	A1 A	20030206 · 20010718	DE 2001-10135051	20010718
L7 AN DN TI	ANSWER 14 OF 33 2002:793827 CAP 137:309605 Production of L-	LUS		04 ACS on STN	
IN		ae str	ains containing	an attenuated ac	eA gene
111	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002081722	A2	20021017	WO 2002-EP2421 DE 2001-10116518	20020306
	EP 1383905 US 2003049803 US 2003054503	A2 A1 A1	20040128 20030313 20030320	DE 2001-10116518 EP 2002-702397 US 2002-114073 US 2002-114043 US 2002-114048	20020306 20020403 20020403
PRAI	DE 2001-10116518 US 2001-283384P WO 2002-EP2421	A P	20010403 20010413		
L7	ANGWED 15 OF 22	a. n			
AN TI	2002:793826 CAPP Production of L-a Enterobacteriacea	LUS amino a ae stra	ains containing	04 ACS on STN an attenuated dg:	sA gene
AN TI IN PA	2002:793826 CAPP Production of L-a Enterobacteriacea Rieping, Mechthi Degussa AG., Ge	LUS amino ae stra ld; He: ermany	acids with ains containing rmann, Thomas		sA gene
AN TI IN	2002:793826 CAPI Production of L-a Enterobacteriacea Rieping, Mechthi Degussa AG., Ga PCT Int. Appl., S PATENT NO.	LUS amino and strains and strains ld; Hesermany 33 pp. KIND	acids with ains containing rmann, Thomas DATE	an attenuated dg:	DATE
AN TI IN PA	2002:793826 CAPI Production of L-a Enterobacteriacea Rieping, Mechthia Degussa AG., Ga PCT Int. Appl., S PATENT NO.	LUS  amino a  ae stra  ld; He  ermany  33 pp.  KIND	acids with ains containing rmann, Thomas  DATE	APPLICATION NO WO 2002-EP2419	DATE  20020306
AN TI IN PA SO	2002:793826 CAPP Production of L-2 Enterobacteriace2 Rieping, Mechthi Degussa AG., Ge PCT Int. Appl., 3 PATENT NO	LUS amino and strains and strains ld; Hesermany 33 pp. KIND A2 A3 A1	DATE  20021017 20021017	an attenuated dgs APPLICATION NO.	DATE 20020306 20010403
AN TI IN PA SO	2002:793826 CAPP Production of L-2 Enterobacteriacea Rieping, Mechthi Degussa AG., Ga PCT Int. Appl., S PATENT NO	LUS amino a ae stra ld; He ermany 33 pp. KIND A2 A3 A1 A2 A1 A1	DATE 20021017 20031030 20021017 20040128 20030313 20030320	an attenuated dgs  APPLICATION NO.  WO 2002-EP2419  DE 2001-10116518  EP 2002-719983  US 2002-114073  US 2002-114043	DATE 20020306  20010403 20020306 20020403 20020403
AN TI IN PA SO	2002:793826 CAPP Production of L-a Enterobacteriacea Rieping, Mechthia Degussa AG., Ga PCT Int. Appl., 3 PATENT NO	LUS amino ae stra ld; Hei ermany 33 pp. KIND A2 A3 A1 A2 A1 A1 A P W  CAPLUS LUS d 6-pho	DATE 20021017 20031030 20021017 20040128 20030313 20030320 20030327 20010403 20010413 20020306  COPYRIGHT 200 Desphofructokinas	APPLICATION NO	DATE 20020306  20010403 20020306 20020403 20020403 20020403

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PATENT NO.
                  KIND DATE
                                    APPLICATION NO. DATE
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PΙ
    WO 2002074944
                   Α1
                        20020926
                                     WO 2002-EP2830
                                                    20020314
                   A1
    DE 10112992
                        20020926
                                     DE 2001-10112992 20010317
    US 2003092137
                   A1
                        20030515
                                     US 2002-98626
                                                    20020318
PRAI DE 2001-10112992 A
                        20010317
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- L7 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:276126 CAPLUS
- TI Process for the fermentative preparation of D-pantothenic acid using corvneform bacteria with poxb gene being eliminated
- IN Dusch, Nicole; Hermann, Thomas; Thierbach, Georg
- PA Degussa A.-G., Germany
- SO PCT Int. Appl., 46 pp.

	- U.	111C. 11PP+-/	to bb.			
	PA	TENT NO.	KIND	DATE	APPLICATION	NO. DATE
PI	WO	2002029020	A1	20020411	WO 2001-EP10	20010905
	DE	10117085	A1	20020411	DE 2001-1011	L7085 20010406
	ΑU	2001091825	<b>A</b> 5	20020415	AU 2001-9182	25 20010905
	ΕP	1320586	A1	20030625	EP 2001-9720	20010905
	US	2002150999	A1	20021017	US 2001-9658	325 20011001
PRAI	DE	2000-10048604	A	20000930		
	DE	2001-10117085	Α	20010406		
	DE	2000-10047142	Α	20000923		
	WO	2001-EP10212	W	20010905		

- L7 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:713591 CAPLUS
- ${\tt TI}$  Process for the fermentative preparation of L-amino acids in coryneform bacteria with amplification of the gnd gene
- IN Dunicau, L. K.; McCormack, Ashling; Stapelton, Cliona; Burke, Kevin;
  Moeckel, Bettina

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	WO 2001071012	A1	20010927	WO 2000-EP6299	20000705
	EP 1179076	A1	20020213	EP 2000-951336	20000705
	BR 2000010817	Α	20020305	BR 2000-10817	20000705
PRAI	US 2000-531265	Α	20000320		
	WO 2000-EP6299	M	20000705		

AΒ The invention relates to a process for the fermentative prepn. of L-amino acids, in particular L-lysine, L-threonine, L-isoleucine and L-tryptophan, using coryneform bacteria in which at least the gnd gene, which codes for the 6-phosphogluconate dehydrogenase, is amplified, in particular overexpressed. Next steps of the process are concn. of the Lamino acid in the medium or in the cells of the bacteria and isolation of the L-amino acid produced. The gene gnd from Corynebacterium glutamicum was cloned and sequenced, and used in the construction of E. coli - C. glutamicum shuttle vector pEC-T18mob2 and plasmid vector pECqnd. The poxB gene for pyruvate oxidase from C. glutamicum was isolated and sequenced and used in construction of vector for integration mutagenesis. Effect of overexpression of the gnd gene with simultaneous elimination of the poxB gene on the prepn . of lysine was investigated.